

A CONTRIBUTION TO THE HERPETOLOGY OF BRITISH COLUMBIA.

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The present paper records the species contained in two collections made in British Columbia. The first and less extensive was made by Dr. and Mrs. G. F. Bodington, at Hatzic in the Matsqui Country, on the Frazer River, near to the United States line. The fauna is that of the Pacific Coast. The other and more considerable collection was made by Samuel N. Rhoads, of Philadelphia, during an extensive exploration of the country, made in the interest of zoological science. His route extended from Tacoma (Washington) to Victoria on Vancouver Island, and thence to Ashcroft in the arid region east of the Cascade Mountains. Then it led one hundred and fifty miles north to Lake La Hache about lat. 52° ; and then returning to Ashcroft it extended eastward to the western base of the Selkirk Range at Sicamoo, and to Vernon a little further south. Mr. Rhoads returned to Revelstoke on the Columbia River, and descended that stream about two hundred miles to Nelson, on Kootenay Lake. Thence he went east to Field, near the summit of the Rocky Mountains. The species collected represent a great variety of climate and altitude. Thus species from Tacoma and Victoria represent the humid coast fauna, and those from Ashcroft eastward, belong to an arid and elevated country. No species were found as far north as Lake La Hache. The species from the Rocky Mountains represent a more elevated and less arid condition than those prevailing at Ashcroft.

BATRACHIA.

Amblystoma macrodactylum Baird.

Large specimens from Hatzic.

Diemyctylus torosus Esch.

Specimens from Tacoma, Hatzic, and Victoria, B. C.

Bufo columbiensis B. & G.

Hatzic and Field, B. C., in the Rocky Mountains.

Hyla regilla B. & G.

Numerous specimens from Tacoma and from Hatzic.

Rana agilis aurora B. & G.

Abundant at Tacoma and Hatzic.

Rana temporaria pretiosa B. & G.

Sicamoo, B. C., and Field, B. C., in the Rocky Mountains—numerous specimens.

Rana virescens Kahn.

A small specimen, having the general appearance of the subspecies *brachycephala* Cope, but with the length of the head entering the total less than three times. From the plains east of the Rocky Mountains.

Spea hammondii intermontana Cope.

A single specimen from Vernon, B. C. The frontoparietal fontanelle is closed, and the supraorbital borders are thickened, so as to give the profile a distinct convexity. The discovery of this species, so far north, greatly extends its range.

REPTILIA.

Pityophis sayi bellona B. & G.

Vernon.

Eutaenia leptocephala B. & G.

An interesting series of eight specimens was obtained by Mr. Rhoads, five from Tacoma and three from Victoria, B. C. He did not obtain it from any locality east of the latter point. In my paper on the Characters and Variations of the Snakes of North America,¹ p. 660, I state that of the specimens in the National Museum, rather less than half have two preocular plates, and one half have seventeen and the other half nineteen rows of scales. Of the eight specimens brought by Mr. Rhoads, six have two, and two have three preoculars; one of the latter coming from Tacoma and one from Victoria. Six have seventeen rows of scales, and two have nineteen, both the latter from Tacoma. The distinctive characters of the species are thus confirmed. The ground color in two of the Tacoma specimens is black, and the others brown. All of the Victoria specimens are brown, and two of them have a red dorsal stripe.

Eutaenia sirtalis trilineata Cope, 1. sup. cit. 662-5.

Four specimens, two from Tacoma, and one each from Hatzic and Sicamoo, B. C. The last two specimens are typical *E. s. trilineata*, but in the two from Tacoma the dorsal stripe marks only a single row of scales, and the lateral is principally on one row, and partly on another. It is not unlikely that the two subspecies

¹ Proceeds. U. S. Natl. Museum, 1892, p. 589 (pub. Sept. 1, 1892).

—*E. s. pickeringii* and *E. s. trilineata*—may have to be united. In my key of subspecies of *E. sirtalis*, the *E. s. pickeringii* was placed inadvertently in section III, while it should have been placed in section IV.

***Eutaenia sirtalis parietalis* Say.**

Three from Hatzic, two from Sicamoos, B. C., and one from Nelson and Vernon, B. C., respectively. Constant to its characters in the interior, but the three specimens from Hatzic show an approach to the *trilineata* form. This is produced by a diminution in the size of the red spots anteriorly, and their obliteration on the posterior part of the body and on the tail.

***Eutaenia elegans lineolata* Cope.**

Two from Tacoma, and one from Sicamoos, B. C.

***Eutaenia elegans vagrans* B. & G.**

Three from Nelson, B. C.

***Crotalus confluentus lucifer* B. & G.**

Vernon.

Total number of species obtained, thirteen, of which eight are batrachians and five snakes, two of the latter represented by two subspecies each.

An interesting feature in this collection is the remarkable extension of the northern range of the *Spea hammondi intermontana*, and the *Ptyophis sayi bellona*. The former had not been known previously north of Pyramid Lake, Nevada, and the latter, north of the Humboldt River in the same State.

Both are restricted to the Great Basin, and their northern range indicates the extension of the fauna to a higher latitude than has been hitherto known. This is consistent with the physical characters of the country, and with the indications furnished by the bird-life, as I am informed by Mr. Rhoads. Another peculiarity is the occurrence of *Crotalus confluentus lucifer* in the same region, instead of the Great Basin form *C. c. lecontei*. The former is the coast species, and has never been detected in the Great Basin.

The species are distributed according to districts, as follows :

PACIFIC COAST.

Diemyctylus torosus.

Hyla regilla.

Rana agilis aurora.

Eutaenia leptcephala.
Eutaenia sirtalis pickeringii.
Eutaenia elegans lineolata.

ARID REGION.

Spea hammondi intermontana.
Pityophis sayi bellona.
Eutaenia sirtalis parietalis.
Crotalus confluentus lucifer.

ROCKY MOUNTAINS.

Rana temporaria pretiosa.
Eutaenia sirtalis parietalis.
Eutaenia sirtalis trilineata.
Eutaenia elegans lineolata.
Eutaenia elegans vagrans.

THE PLAINS.

Rana virescens.
Bufo columbiensis was sent from the coast and from the Rocky Mountain region. It occurs also in the arid region in Oregon. *Eutaenia sirtalis parietalis* has the same distribution.
Amblystoma macrodactylum has not been previously recorded from British Columbia, although its occurrence at Puget Sound would lead us to expect it.